MUTOH

Operation Instructions

Rockhopper 3 Extreme

English

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1 SAFETY INSTRUCTIONS

1.1 REGULATIONS

The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives.

By affixing the CE marking, the manufacturer, his authorized representative, or the person placing the product on the market or putting it into service ensures that the item meets all the essential requirements of all applicable EU directives and that the applicable conformity assessment procedures have been applied.

This product is tested and approved by the Canadian Standards Association (CSA), this to provide increased assurance of quality and safety.

The product is tested according to IEC60950.
This standard tries to cover all safety aspects.

- Mechanical, electrical
- Choice of components
- Choice of materials: flammability!
- Connectors, cables …
- Fire enclosure
- …

This means the product is safe for users, service personnel and production personnel.

CSA International certification is not a legal commitment but it assures the quality and safety of the machine.

Your product is designed and manufactured with high-quality materials and components, which can be recycled and reused.

When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC – WEEE regulation.

Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ICES

This Class A digital apparatus complies with Canadian ICES-003.

1.2 MANAGING VOC'S

When Mutoh printers with (low)-Solvent inks are used, volatile organic compounds (VOCs) will be released.
In order to protect human health and the environment, VOCs must be managed. This means VOCs need to be controlled and compliance with all local, state and federal environmental, occupational health and safety regulations on VOCs in the atmosphere and in the workplace is needed.
The amount of released VOCs depends on multiple factors: room volume, unforced ventilation, print mode, number of printers in the room, heaters settings, kind of media, use of extra dryers, print production…
Because of differences in local regulations and working conditions, it is recommended to consult a local consultancy agency to determine the regulations involved. An acknowledged laboratory can determine the total amount of released VOCs in the atmosphere and in the workplace. Consequently they can determine if forced ventilation for occupational health and air pollution control devices are needed. An engineering firm could be consulted on the installation of the ventilation system where prints are produced, handled and stored.

1.3 HANDLING INKS AND WASTE

Before handling inks / cleaning fluids and their waste, please read the Material Safety Data Sheets (MSDS) and the labels for important health, safety and environmental information carefully. All safety data sheets are periodically updated. These sheets and their translations can be found on www.mutoh.eu/Products/Downloads/extra/msds .

- Only use original manufacturer's ink and appropriate cleaning liquid. Before installing an ink holder, shake it gently. Doing so will preserve print quality.
- When ink is moved from a cold place to a warm place, keep the ink for three hours or more in the new printing environment before printing.
- Do not disassemble ink holder. Otherwise, ink may get in your eyes or on your skin. A disassembled ink holder can not be used either.
- When refilling ink, use original manufacturer's ink. Our Mutoh printers are designed to use original ink. If you use ink which are not produced by the original manufacturer :
  - printing might become blurred and the end of the ink in the holder might not be detected correctly
  - Any problems caused by using an ink holder other than those recommended above will not be covered by the warranty, and repair expenses will be paid by the customer.
- For handling waste : see section 13 on the MSDS-sheet
- Inks / Waste
  - General advice: wear safety glasses and gloves especially when handling the waste ink.
  - After spill: remove contaminated clothing.
  - After inhalation: if difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.
  - After skin contact: wash thoroughly with soap and water.
  - After eye contact: wash affected eyes for at least 15 minutes under running water while the eyelids are held open.
  - After swallowing: rinse mouth and drink plenty of water. Never induce vomiting.

1.4 WARNING, CAUTIONS AND NOTES

Safety terms in this manual and the contents of warning labels attached to the printer are categorized into the following three types, depending on the degree of risk (or the scale of accident).
Read the following explanations carefully and follow the instructions in this manual.

Safety terms	Details
⚠ **Important** ⚠	Must be followed carefully to avoid death or serious bodily injury.
⚠ **Caution** ⚠	Must be observed to avoid bodily injury (moderate or light) or damage to your equipment.
⚠ **Notes** ⚠	Contains important information and useful tips on the operation of your printer.

1.5 SAFETY INSTRUCTIONS

Machines must be installed according to Mutoh's Installation Guide also after moving machines to another location; maintenance needs to be done according to the maintenance manual.

- To prevent fire or electrical shock, never use a power supply source other than the one rated for the product in the country where you purchased the product.

- Use only the provided power cable. To prevent fire or electrical shock, follow the instructions below when handling the power cable:
  - Do not cut or modify the cable.
  - Do not put heavy objects on the cable.
  - Do not bend, twist, knot or pull the cable.
  - Do not wire the cable near equipment that generates heat.
  - Do not use the cable with any other electrical device
  - Do not handle the cable with wet hands

- Be aware of all caution and warning labels to avoid potentially hazardous situations.

- To prevent fire or electrical shock, machines must be connected to a properly grounded electrical power outlet. Do not connect the power cable to a power strip or a power source shared by other electrical devices.
  - Make sure that no foreign substances such as dust etc. are stuck to the power plug.
  - Make sure that the power plug is firmly inserted to the edge of the power socket.

- Do not disable any safety precautions systems.

- Do not operate the unit unless all parts are mounted.

- Do not place the machine in the following areas. Doing so may result in the machine tipping or falling over and causing injury.
  - Unstable surfaces
  - Sloping floors
  - Areas subject to vibration by other equipment
- Do not stand on or place heavy objects on your machine. Doing so may result in the machine tipping or falling over and causing injury.

- Do not place the machine in humid and dusty areas or in areas exposed to flammables. Doing so may result in electrical shock or fire.

- Do not cover the ventilation hole of your machine with cloth, such as a blanket or table cloth. Doing so could obstruct ventilation and cause fire.

- Do not insert or drop metal or inflammable objects into openings, such as ventilation outlets. Doing so may result in electrical shock and fire.

- Do not touch the media guide during printing. It is hot and may cause a burn.

- Do not touch the media feed slot, platen or media guide while heaters are operating. They are hot and may cause a burn.

- Stop using your machine if a liquid has been spilled into it. This may cause electrical shock or fire. Switch the machine off as soon as possible, unplug the power cord, and contact your local MUTOH dealer.

- Be sure to power OFF the machine and unplug the power cable from the outlet before cleaning the machine. Use a damp cloth to clean the machine. Do not use thinner, benzene, alcohol or other active agents. Doing so may result in damage or paint peeling from the casing.

- Do not bend or pull the waste fluid tube. Doing so may cause waste fluid to leak out and malfunction of the product.

- Do not tilt the machine, place it against a wall or turn it upside down. Doing so may cause ink to leak inside the machine. Movement after transport is also not covered by the warranty.

- When cutting roll media, be careful of the following. Incorrect handling can result in injury to the hands and fingers from the razor blade.
  - When holding the media, do not place fingers over the media cut groove.
  - Move the razor blade slowly along the media cutting groove.

- To prevent back pains and other injuries, always work with at least 4 people to unpack or move the machine. Keep the machine horizontally during transportation.

- Do NOT transport the machine to another room without contacting your local Authorized Mutoh Dealer.

1.6 WARNING LABELS

The handling, attachment locations, and types of warning labels are explained below.
Warning labels are attached on areas which require attention. Read and understand the positions and contents thoroughly before performing your work.

1.6.1 Handling the warning labels

Be sure to note the following when handling the labels.

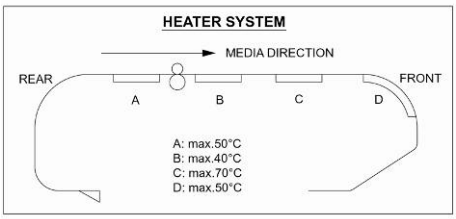
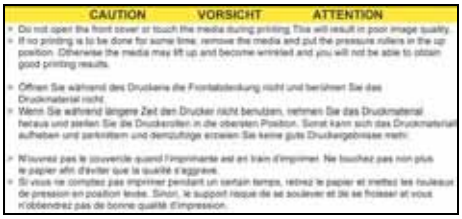
⚠ Notes ⚠

- Make sure that all labels can be recognized. If text or illustrations cannot be seen clearly, either clean or replace the label.
- When cleaning labels, use a cloth with water or neutral detergent. Do not use a solvent or gasoline.
- If a warning label is damaged, lost or cannot be recognized, replace the label. When replacing warning labels, contact your local MUTOH dealer.

1.6.2 Locations and types of warning labels

The locations of warning labels are shown below.

1.6.2.1 Location and types of warning labels on front part.

<table>
<tr><td>1</td><td> </td><td>2</td><td> </td></tr>
<tr><td>4-10</td><td> </td><td>5</td><td> 
</td></tr>
<tr><td>6-9</td><td> </td><td>7</td><td> 
</td></tr>
<tr><td>3</td><td colspan="3">
</td></tr>
<tr><td>8</td><td colspan="3">
<table>
<tr><td rowspan="2">Number of colours</td><td rowspan="2"></td><td colspan="8">Slot number of ink cassette</td></tr>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr>
<tr><td>4</td><td>2x4 colours</td><td>Black</td><td>Yellow</td><td>Cyan</td><td>Magenta</td><td>Magenta</td><td>Cyan</td><td>Yellow</td><td>Black</td></tr>
<tr><td>6</td><td>1x6 colours</td><td>Black</td><td>Cyan</td><td>Transition Liquid</td><td>Transition Liquid</td><td>Yellow</td><td>Magenta</td><td>Light Cyan</td><td>Light Magenta</td></tr>
</table>
</td></tr>
</table>

1.6.2.2 Location and types of warning labels on back part.

No.	Type
3	**CAUTION** THIS UNIT HAS TWO POWER SUPPLY CORDS; WHEN WINDING UNIT IS PROVIDED. TO REDUCE THE RISK OF ELECTRICAL SHOCK, DISCONNECT ALL POWER SUPPLY CORDS BEFORE SERVICING
4	

2 PRODUCT OVERVIEW

2.1 PART NAMES AND FUNCTIONS

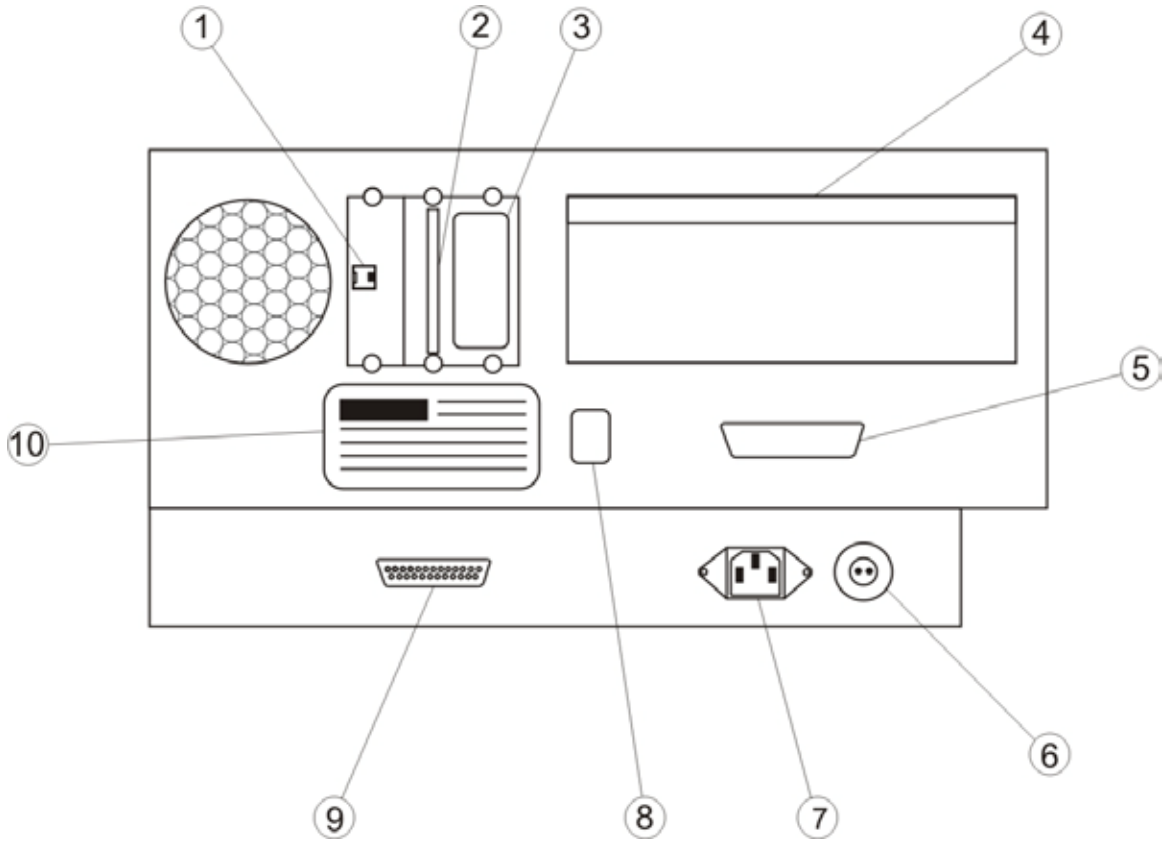
Part names and functions are explained below.

2.1.1 Front

No	Name	Function
1	Heater plate	Supports and heats the media during printing.
2	Front cover	Keeps the operator safe from the drive parts of the printer while it is operating. Only open and/or close the cover to perform following operations: · Media setting and replacement · Cutter blade replacement · Cleaning the cleaning wiper
3	Carriage	Drives and holds the print heads.
4	Operation panel	To control the printer.
5	Ink compartment cover	Covers the ink compartment.
6	Stand	Carries the main body.
7	Waste bottle assembly	Collects the waste fluid.
8	Winder (*)	Rolls up the roll media.
9	Front tension system	Keeps the media under tension.
10	Left maintenance covers	Covers the maintenance areas.

(*) Only a 90” model comes standard with an Unwinder/Winder 100 system. For a 65” model, one has to choose between a Tensioning winder 30 or an Unwinder/Winder 100.

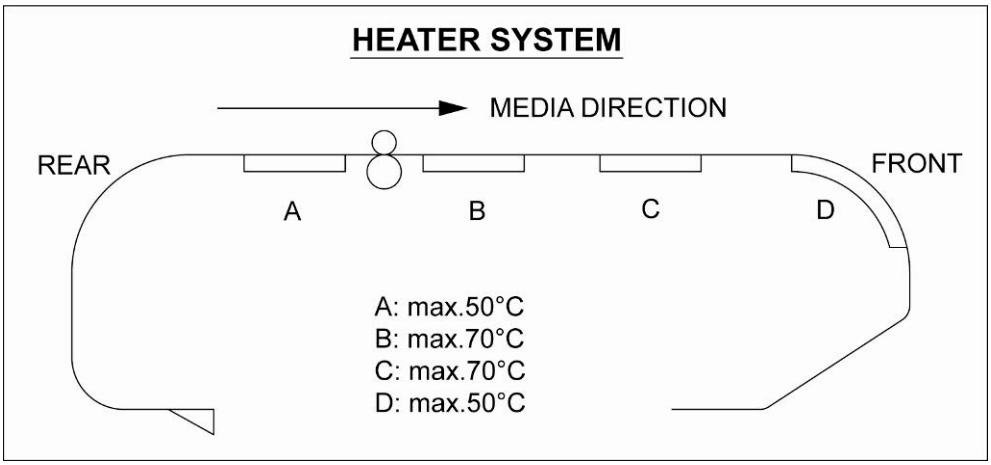
2.1.2 Rear



No	Connection
1	Ethernet connector
2	Card reader slot
3	SmartChip label
4	HardDisk bracket cover
5	Centronics connector
6	Foot switch connector
7	Power inlet
8	Environmental label
9	DB-25 connector
10	ID label

2.1.3 Heater system

Under the print platforms, heater strips are attached. Each heater can be set separately. Please refer to the table below to know the function of each heater.



Heater element	Temperature	Function
Pre-heater (Heater A)	20 – 50°C	· Open the pores to make the media more receptive for Eco-Solvent Ultra Ink
Fixer (Heater B)	20 – 70°C	· To establish optimum fixation onto the media (coated and uncoated). · Optimizes the dot gain control.
Post-Fixer (Heater C)	20 – 70°C	· The post-fixer finalizes the fixation process and helps to make the prints touch-dry.
Dryer (Heater D)	20 – 50°C	· The dryer completes the drying for compatibility with the take-up in combination with higher output speeds. · Stickiness of printed banner materials is improved.

There have been a number of requests from the field, asking the heaters to be on by default for a few user settings. This has now been implemented as follows:

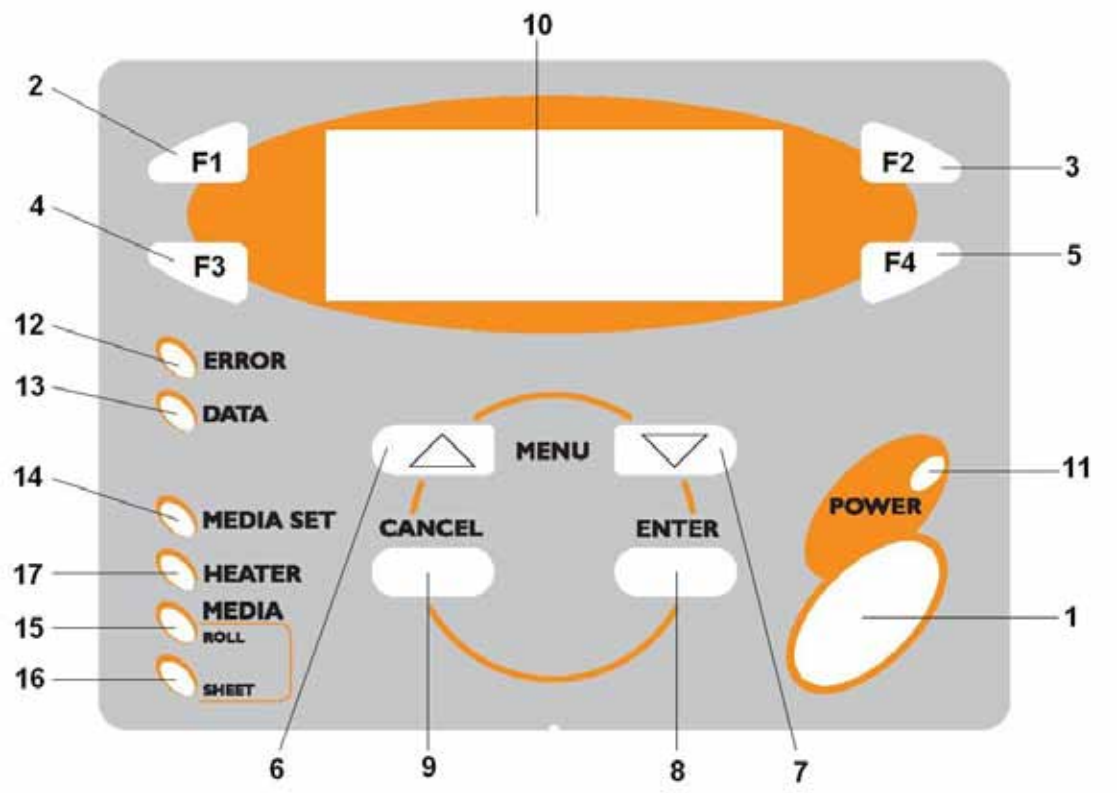
· For user 1 and user 8 default settings are as follows:
  - ¡ Pre heater A: 50°C
  - ¡ Fixer B: 50°C
  - ¡ Post Fixer C: 50°C
  - ¡ Dryer D: 50°C

· For users 2 è 7, by default the heaters are still OFF.

⚠ Notes ⚠

Please note some RIP software do not allow selection of the user from software side. In some cases, however, they do automatically activate user 8**.**

2.1.4 Operation panel



2.1.4.1 Keys

No	Name	Normal	Setup menu display
1	[POWER] key	Switch the printer ON and OFF	Switch the printer ON and OFF
2	[F1] key	Executes the function assigned to F1.	Executes the function assigned to F1.
3	[F2] key	Executes the function assigned to F2.	Executes the function assigned to F2.
4	[F3] key	Executes the function assigned to F3.	Executes the function assigned to F3.
5	[F4] key	Executes the function assigned to F4.	Executes the function assigned to F4.
6	[MENU -] key	Changes the LCD monitor display to the setup menu status.	Changes the menu in reverse order.
7	[MENU ¯] key	Changes the LCD monitor display to setup menu status.	Changes the menu in forward order.
8	[ENTER] key	Displays the print mode currently set.	Determines the new parameter value and changes the LCD monitor display to the next menu. Sets the parameter value and changes the LCD monitor display to the next menu.
9	[CANCEL] key	-	Cancels the new parameter value and changes the LCD monitor display to the next menu. Clears the parameter value and changes the LCD monitor display to the next menu.

2.1.4.2 LCD and LED's

No	Name	Colour	Status	Function
10	LCD monitor	-	-	The monitor displays the operation status and error messages of the printer.
11	POWER lamp	Green	ON	The printer is on.
			OFF	The printer is off.
12	ERROR lamp	Red	Flashing	An error has occurred. The contents will be displayed on the LCD monitor.
			OFF	Either there is no error or the power is off.
13	DATA lamp	Orange	ON	The printer is receiving print data.
			Flashing	The printer is analyzing received data.
			OFF	The printer is waiting to receive print data.
14	MEDIA SET lamp	Orange	ON	The pressure roller is in the release position. Media has not been loaded.
			OFF	The pressure roller is in the secured position. The media has not been loaded.
15	ROLL lamp	Orange	ON	The media type is set to roll media.
			OFF	The media type is set to sheet media.
16	SHEET lamp	Orange	ON	The media type is set to sheet media.
			OFF	The media type is set to roll media.
17	HEATER lamp	Orange	ON	The temperature of the heating elements is the requested temperature. The real temperature is the same as the requested temperature.
			Flashing	The heating elements are warming up. The real temperature is different as the requested temperature.
			OFF	The heating elements are powered OFF.

2.2 INSTALLATION REQUIREMENTS

An Authorized Mutoh technician will install your unit and will make the printer ready for its first job. A room which meets the environmental and space conditions should be foreseen by the user.

Area	12.7m² (144ft²) or larger. Frontage of 4.7m (15.7ft) or greater.

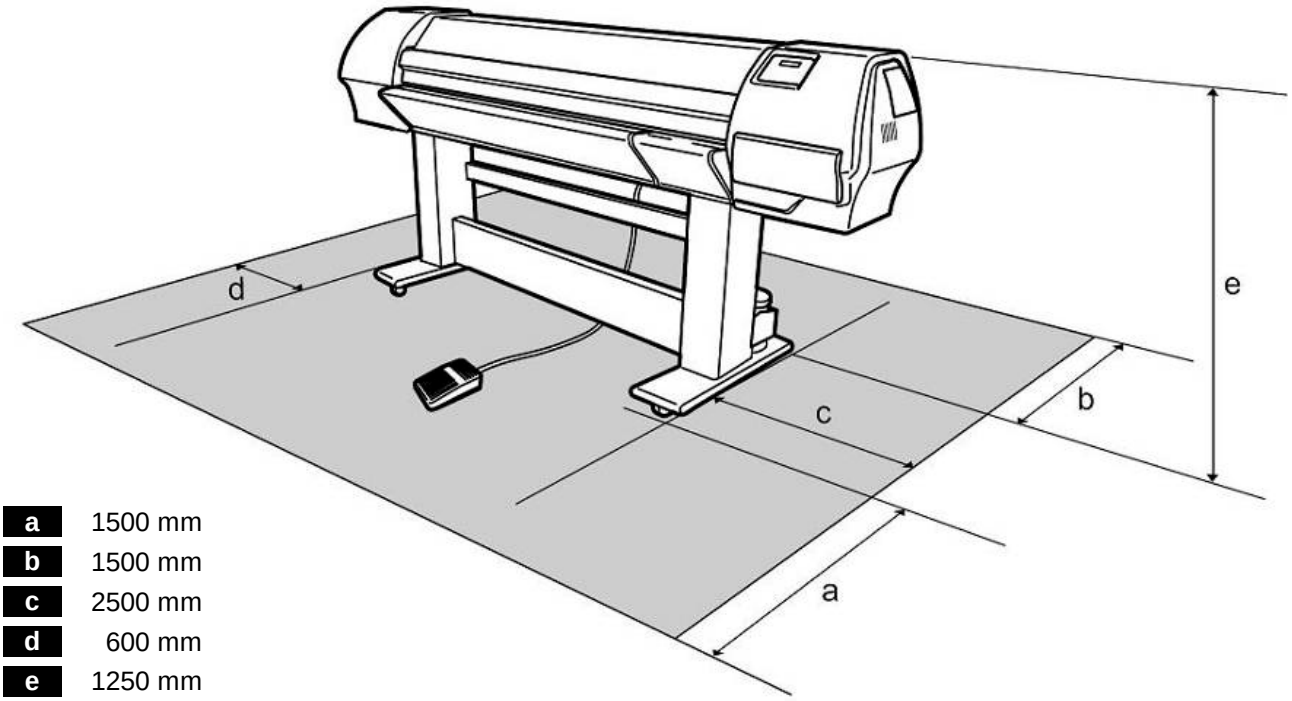
Floor loading capability	2940 Pa (300kg/m²) or over

Electrical	Voltage	AC 100-120V AC 220-240V
	Frequency	60/50Hz±1Hz
	Capacity	AC100V-120V : 12A AC220V-240V : 6A

In order to protect the printer for over currents, short circuits and earth faults, the building installation should be equipped with an automatic breaker double pole of 20 A and an earth leakage switch of 300 mA.

Environmental	Recommended working environment	Temperature: 23°C Humidity: 55%, without condensation
	Operational conditions	Temperature: 20°C - 30°C Humidity: 40% to 65%, without condensation
	Rate of change	Temperature: No more than 2°C per hour Humidity: No more than 5% per hour
	Storage environment	Temperature: 4°C to 50°C Humidity: 40 to 80%, without condensation (When ink has been discharged.)

Install the product on a flat surface that fulfils the following conditions.



a 1500 mm
b 1500 mm
c 2500 mm
d 600 mm
e 1250 mm

3 BASICS

3.1 POWERING ON CYCLE

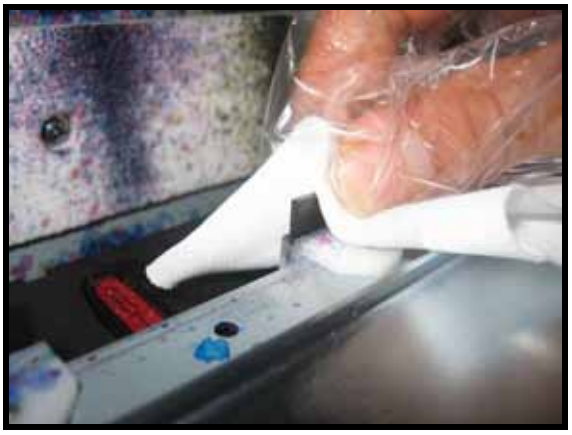
⚠ Caution ⚠

BEFORE POWERING ON THE PRINTER, MAKE SURE THAT THE WASTE BOTTLE IS INSTALLED AND THAT THE WASTE TUBES ARE CONNECTED TO THE WASTE BOTTLE.

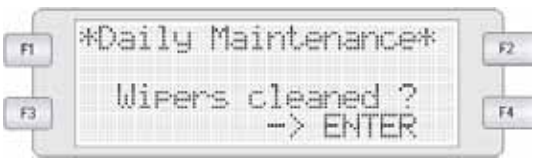
Power ON the printer according to the procedure below:

Step 1 : Press the [POWER] key of the operation panel.
The POWER lamp of the operation panel will light (green).

Step 2 : The printer will ask if you want to clean the wipers. When it is the first start up in a few hours, it is highly recommended to press [YES] – [F2] and to clean the wipers with Mutoh Eco-Solvent Ultra cleaning in order to remove all ink and to make the wipers more elastic.



Step 3 : Press the ENTER key when you have done. The carriage will cap in again.

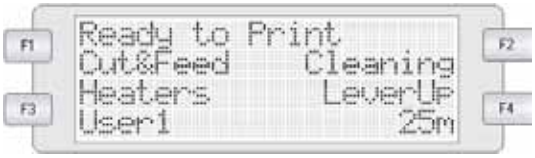


Step 4 : After finishing the daily maintenance, the print will automatically perform a normal cleaning.

Step 5 : After finishing the cleaning cycle, the media measurement screen will be displayed (in case there is media loaded)

Step 6 : Make the correct settings and press the [F4]-key to start the media initialization.

Step 7 : If everything is done correctly, the following screen should appear..



⚠ Notes ⚠

IF THERE ARE ANY PROBLEMS DURING THE INITIAL START-UP OPERATION, THE PRINTER WILL DISPLAY A MESSAGE ON THE OPERATION PANEL, AND THE OPERATION MAY STOP. IF THE OPERATION STOPS, REFER TO "TROUBLESHOOTING", AND TAKE THE APPROPRIATE ACTIONS.

Step 8 : Before start printing, be sure to perform a nozzle check to ensure all nozzles are present. If not, perform the necessary cleaning cycles.

3.2 POWERING OFF CYCLE

Power OFF the printer according to the procedure below:

⚠ Notes ⚠

PLEASE BE SURE TO PERFORM THE NECESSARY MAINTENANCE BEFORE POWERING OFF THE MACHINE. ALL DETAILS CAN BE FOUND IN CHAPTER 4.

Step 1 : Verify the following regarding the operational condition of the printer:
- Ø There is no printing operation being performed.
- Ø The operation panel is in the main screen.

Step 2 : Press the [POWER] key of the operation panel to switch OFF the printer.

Step 3 : [Power OFF] will be displayed for a few seconds

- Ø Following message is displayed on the operation panel.

- Ø All lamps and the LCD of the operation panel will switch OFF.
- Ø The printer will automatically perform a TubingFlush and power OFF.

3.3 LOADING MEDIA

3.3.1 Loading roll media

Please refer to the User's Guide of the Unwinder/Winder 100 or the T- winder to know how to load roll media.

3.3.2 Loading sheet media

To load sheet media, follow the steps below.

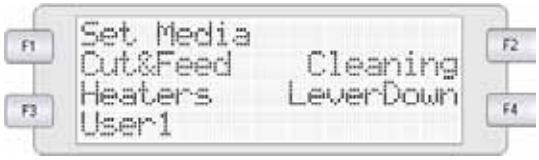
Step 1 : Power ON the printer.

Step 2 : Unload media if necessary.

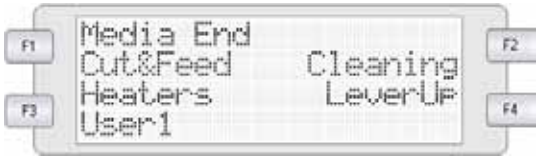
Step 3 : Be sure that the pressure rollers are raised before loading sheet media.

Step 4 : When no media is loaded and …

- the pressure rollers are raised, the following message will be displayed.

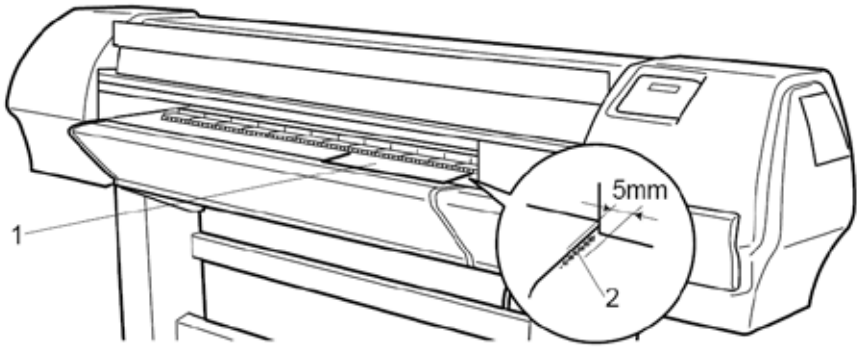


- the pressure rollers are lowered, the following message will be displayed.



Step 5 : Open the front cover.

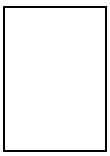
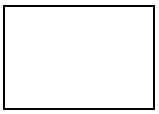
Step 6 : Load a sheet of media at the right side of the printer. Position the media next to the media setting position (line of little holes in the media guide platform). The maximum distance between the guideline and media is 5 mm.



Machine	Minimum Media Width	Maximum Media Width	Printing Width
RH 3 - 65 Extreme	A4 (210 mm – 8,27")	1651 mm (65.00")	1640 mm (64.56")
RH 3 - 90 Extreme	A4 (210 mm – 8,27")	2240 mm (88.18")	2230 mm (87.79')

Step 7 : Make measurement settings in following menu:

SetupMenu (1/7) ► MediaSet [F4] ► SheetSize

	Menu Choice	Description
F1	Auto	Media measurement sequence ► REAR – RIGHT – LEFT – TOP
F2	Length	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation 
F3	Width	Media measurement sequence ► RIGHT – LEFT – TOP Media orientation 

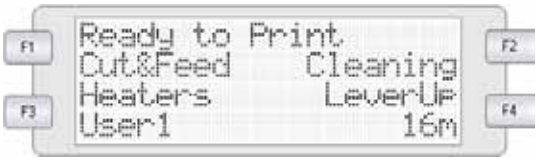
Step 8 : Close the front cover.

Step 9 : Start media initialisation.

	Menu Choice	Description
F2	Sheet / Roll	Select which kind of media is loaded
F3	Lever Up	Raise the pressure rollers if necessary
F4	User 1-8	Select user profile (1-8)
ENTER	Start media initialization	

Step 10 : Media will be measured according to the settings made before.

Step 11 : If the media has been loaded correctly, the following message will be displayed:



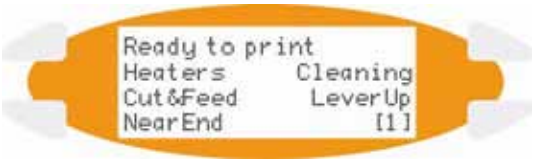
3.4 REPLACING INK CASSETTES

3.4.1 Ink cassette behaviour

Please read this chapter thoroughly to know the behaviour of a Mutoh ink cassette used with the Rockhopper 3 series printers.

An ink cassette contains 220 or 440 ml of ink. The amount of ink left in the cassette is monitored by the smart chip installed on the cassette. During printing, two ink related messages can be displayed:

Ink Near End – message

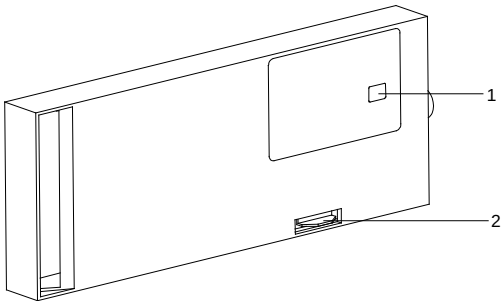


This message will be displayed when there is only 6 % of ink left in the ink cassette. The numbers between the [ ] marks correspond the near empty ink cassettes.

You can print until the [Ink End]-message is displayed. Be sure to have a new cassette at hand.

Ink End – message

This message will be displayed when the flag *(2)* in the cassette comes out. The cassette has to be changed as soon as possible. The printer will stop all actions. No further action can be taken until you have done the replacement. The numbers between the [ ] marks correspond the near empty ink cassettes.



3.4.2 Types

This printer is designed to use Mutoh Eco-Solvent Ultra Ink cassettes.

If using other ink cassettes

- Warranty will be void.
- Prints may not reach the expected quality level.
- Heads can be damaged.
- Printer will not recognize these cassettes when inserting (smart chip)

Please refer to the latest price list to know the available ink and cleaning cassettes for the Rockhopper 3 Extreme, and for the latest price and part numbers.

3.4.3 Replacement procedure

Step 1 : Remove the empty ink cassette(s) as shown on the screen.

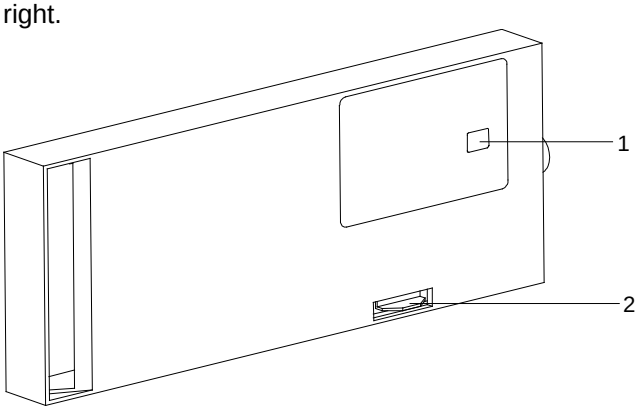
Step 2 : Dispose the used ink cassette by putting it in a plastic bag in accordance with local regulations or laws.

Step 3 : Remove the new ink cassette out of its package.

Step 4 : Insert the cassette in the appropriate slot according to the ink colour configuration label.

Ink Configuration	Ink Cassette Slot Number							
	1	2	3	4	5	6	7	8
2x4	Black	Yellow	Cyan	Magenta	Magenta	Cyan	Yellow	Black
1x6	Black	Cyan	Stabilizer/ Cleaning	Stabilizer/ Cleaning	Yellow	Magenta	Light Cyan	Light Magenta

Be sure to insert the cassette correctly, with the SmartChip-side (1) first and flag (2) pointing right.



Step 5 : The printer will continue printing.

3.5 REPLACING CUTTING BLADE

Read following information on when and how to replace the cutting blade.

3.5.1 Replacement time

Replace the cutting blade under the following conditions:

- Media cannot be cut clearly.
- When the cut edge is blurred.

3.5.2 Replacement procedure

Follow the steps below to replace the cutting blade.

Step 1 : If the printer is powered ON, verify following items:
- Printing or other operations are not performed.
- Make sure that the display on the operation panel shows the normal status.
- The MEDIA SET light on the operation panel goes off.

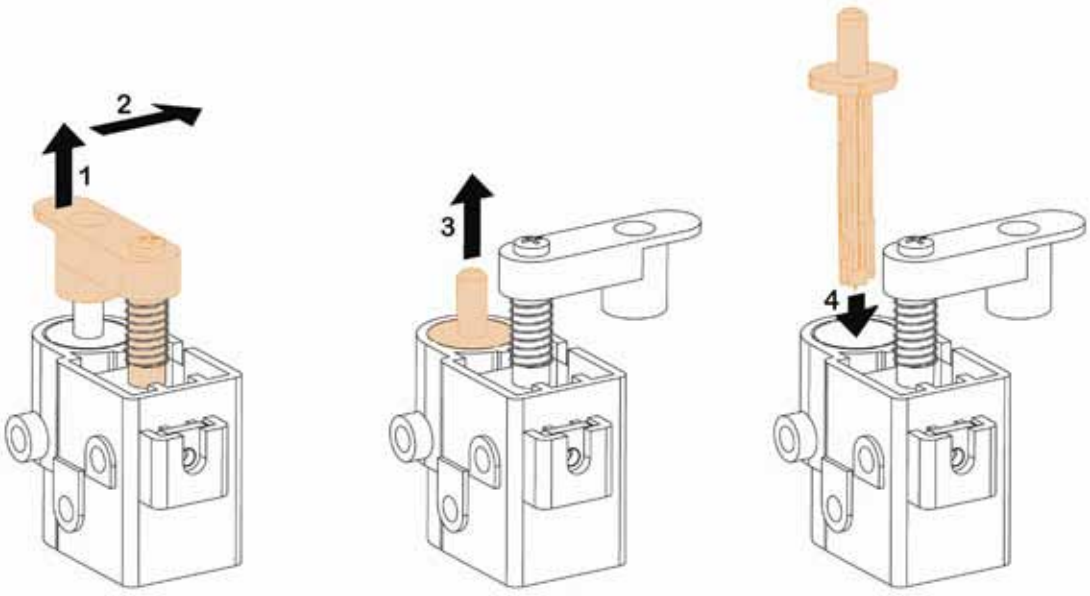
Step 2 : Go to the H. Unlock menu (SetupMenu 5/7) and unlock the head.

Step 3 : Open the front cover.

Step 4 : While pressing the cutting blade holder tab, rotate the cutting blade holder lever in the direction shown on the picture (2).

Step 5 : Take out the cutting blade (3) and insert the new cutter into the media cutting blade holder (4).

Step 6 : While slightly pressing the cutting blade holder tab, return the cutting blade lever to its original position.



Step 7 : Close the front cover.

Step 8 : Press the [ENTER] key on the operation panel.
- The carriage returns to its original position and returns to menu 6/7.

Step 9 : Cutting blade replacement has been finished.

3.6 REPLACING THE WASTE BOTTLE

3.6.1 Replacement Time

Replace the waste liquid tank when following message is displayed.

3.6.2 Replacement Procedures

Follow the steps below to empty the waste bottle.

Step 1 : Open the lid and remove the waste bottle.

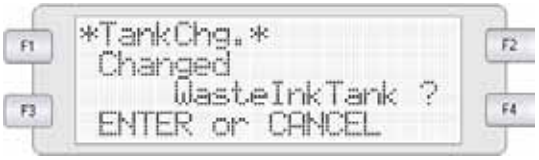
Step 2 : As soon as the waste bottle has been removed, the following message appears:

Step 3 : Pour the waste liquid in another bottle and dispose it according to the local regulations.

Step 4 : Replace the waste bottle.

Step 5 : Be sure to close the lid.

Step 6 : Press the [ENTER]-key to confirm that waste bottle is empty.



3.7 TRANSFER AND TRANSPORTATION

This section explains transferring and transporting the printer.

3.7.1 Transferring the printer

Following are instructions for transferring the printer.

(1) Before the transfer

If you are using the stand, follow the steps below to transfer the printer.

Step 1 : Make sure the printer is turned off.

Step 2 : Make sure the head is in the right edge position (capping position).

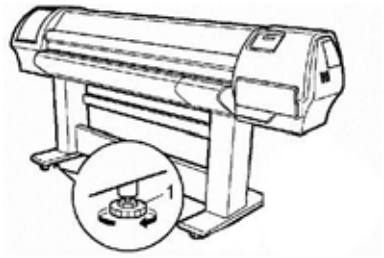
Step 3 : Disconnect the power cable and all other cables.

Step 4 : The four adjusters are turned in the direction shown on the diagram.

Step 5 : Transfer the printer.

⚠ Notes ⚠

The caster attached to the stand has been designed for transferring the printer during short distances.



1 Adjuster
2 Caster

(2) After the transfer

Follow the steps below to prepare the printer to be used after the transfer.

Step 1 : Make sure that you place the printer on an adequate place.

Step 2 : Connect the power cable and other cables.

Step 3 : Perform a nozzle check to check if the printer head has clogged.

Step 4 : Perform a fine adjustment of image quality.

3.7.2 Transporting the printer

When you transport the printer, the printer should be repacked in the original box and packing materials, to protect it from vibration or impact.

The printer should be in long store conditions.

4 PERIODICAL MAINTENANCE

4.1 DONE BY END USER

This section describes the periodical services required for this machine. The periodical services ensure stable printout quality of the machine. In the periodical services, some service parts may be checked, cleaned, or replaced.

Perform periodical inspections according to the table below.

No	Action	Months
1	Clean wipers	weekly
2	Clean the edges of the caps in maintenance station	
3	Clean the area around the caps	
4	Clean around bottom of the heads	
5	Replace spitting box sponge	monthly
6	Change the wipers	
7	Change absorbent behind maintenance station	every 6 months

⚠ Notes ⚠

- All cleaning in “Ink areas” must be done with Eco-Solvent Ultra cleaning.
- Above maintenance cycle is based on use:
  8 hours / day, 5 days / week and 44 weeks / year.
  If machine is used more, maintenance periods will come earlier.

Available kits for the end user and their order numbers

1. *User and good shape kit for 6 months* *KY-80300*

No	Description	Quantity
1	Sponge plate	1
2	Wipers	24
3	Spitting box sponge	6
4	Cleaning Liquid 250 ml	2
5	Instruction sheet	1
6	Good shape kit	1

2. *Good shape kit* *KY-80305*

No	Description	Quantity
1	Gloves	100
2	Pipette	20
3	Swabs	50
4	Polyknit wiper	300

3. *Eco-Solvent Ultra cleaning in a 250 ml bottle* *CL-90250*

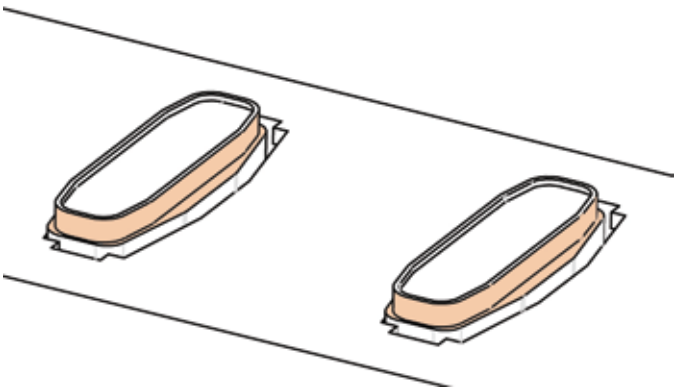
4.1.1 Weekly Maintenance

4.1.1.1 Clean the edges of the caps and the area around the caps

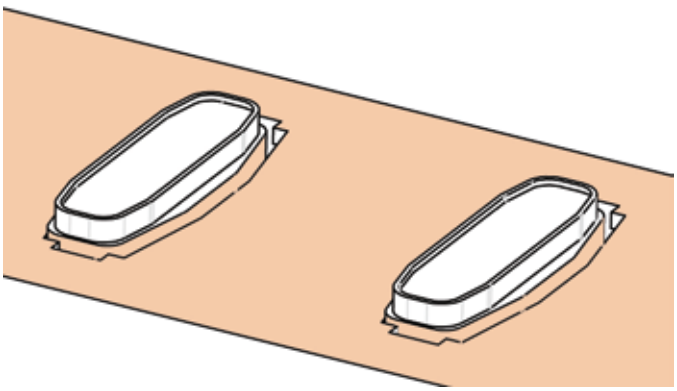
Step 1 : Power ON the printer and go to the “WiperClean-Menu”, DON’T press enter when in it.

This will cause the unlocking of the carriage.

Step 2 : Clean the edges of the caps with the cleaning swab, if necessary use some Eco solvent cleaning liquid.



Step 3 : Clean the area around the caps with a polyknit wiper.

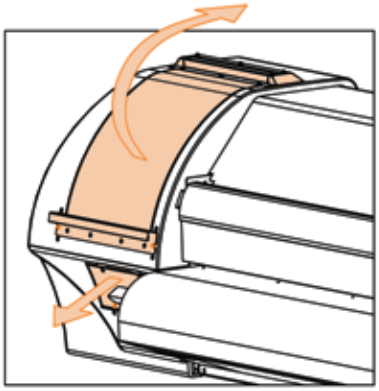


Step 4 : Press the [ENTER] key in the active display (=WiperClean menu)

The head will cap in and be locked.

4.1.1.2 Cleaning around the bottom of heads

Step 1 : Open the left maintenance covers by removing the four screws.



Step 2 : Power ON the printer and go to the “WiperClean-Menu” DON’T press enter when in it.

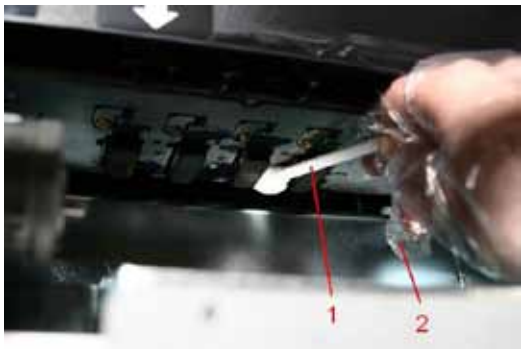
This will cause the unlocking of the carriage.

Step 3 : Slide the carriage into the left maintenance area.

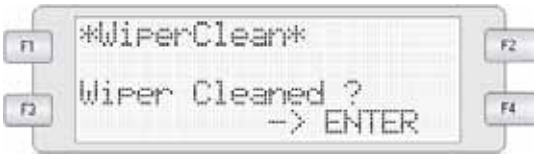
Step 4 : Clean the edges of the heads with a swab (1) wetted by eco solvent cleaning as shown on the image below.

⚠ Caution ⚠

- **Make sure not to touch the nozzle plate. This could lead to poorer print quality.**
- **It is recommended to wear gloves (2) as shown on the picture below.**



Step 5 : Press the [ENTER] key in the active display (=WiperClean menu)



The head will cap in and be locked.

4.1.1.3 Cleaning the wipers

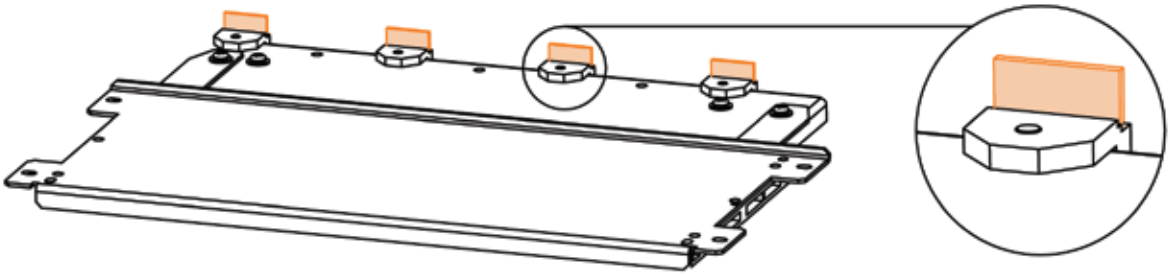
Step 1 : Power ON the printer and go to the “WiperClean-Menu”, DON’T press enter when in it.

This will cause the unlocking of the carriage.

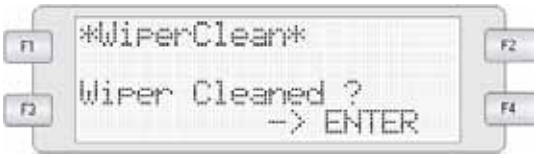
Step 2 : Clean the wipers (3) with a polyknit wiper (2), use some Eco solvent cleaning liquid to remove drops of ink.

⚠ Caution ⚠

- **It is recommended to wear gloves as shown on the picture below.**



Step 3 : Press the [ENTER] key in the active display (=WiperClean menu)



The head will cap in and be locked.

4.1.2

Monthly maintenance

4.1.2.1 Replacing the wipers

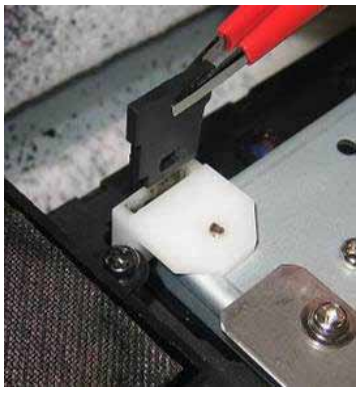
Step 1 : Power ON the printer and go to the “WiperClean-Menu”. This will cause the unlocking of the carriage.

Step 2 : Slide the carriage to the left side of the machine.

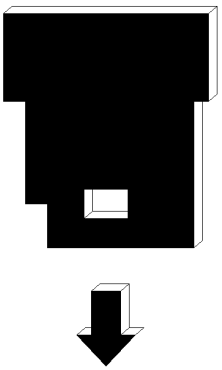
Step 3 : Remove the old wipers with a pair of tweezers

Step 4 : Before inserting a new wiper, moisten the wiper with Eco-Solvent Ultra Cleaning Liquid.

Step 5 : Insert the moistened wiper with a pair of tweezers.



Be sure to insert the wiper correctly as shown below:



When standing in front of the machine.

Be sure that the wiper clicks in the wiper holder!

Step 6 : Close the front cover and press the [ENTER] key. The head will cap in.

⚠ Notes ⚠

- Be careful not to break the lips of the wiper arm while installing the wipers.
- Do not touch the wipers with your bare hands to avoid fat or dirt get in contact with the wipers and automatically the nozzle plate. Use a pair of tweezers to avoid this. Clean wipers with appropriate cleaning liquid in case of dirt.

4.1.2.2 Replacing the sponge in the spitting box.

⚠ Notes ⚠

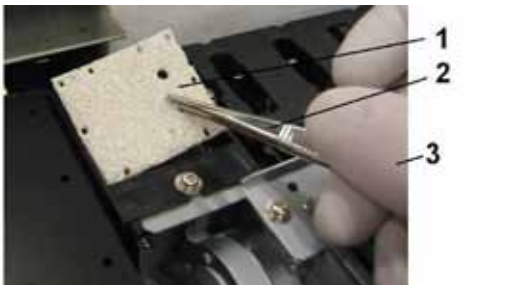
· Use gloves and tweezers to change the absorbent in the flushing box.

Step 1 : Go to the WiperClean menu and DON'T press enter when in it.

Going to the WiperClean menu will unlock the head

Step 2 : The carriage moves to the waiting position for replacing the flushing sponge.

Step 3 : Remove the old absorbents with tweezers. (See image below)

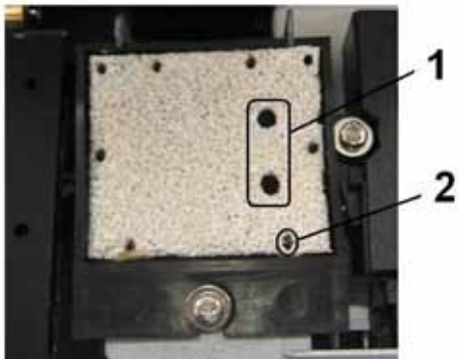


1 = Sponge (KY-42889)
2 = Tweezers
3 = Gloves

Step 4 : Install the new absorbents in the flushing box.

⚠ Notes ⚠

· Make sure that the 2 holes are on the right side of the flushing box and that the pins of the black box are in the holes of the absorbent.



1 = Two holes
2 = Pin of black box

Step 5 : Close the front cover and press the [ENTER] key in the active display (=WiperClean menu). The head will cap in and be locked.

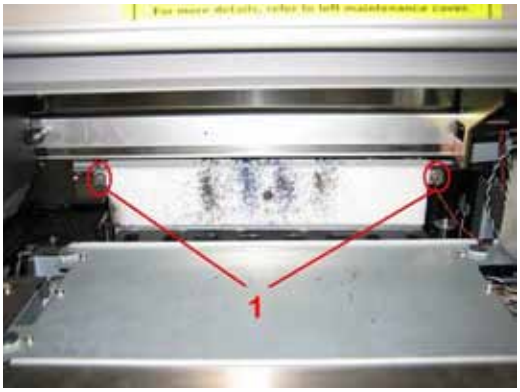
4.1.3 Every 6 months maintenance

4.1.3.1 Change upper sponge at back of the capping station.

Step 1 : Go to the WiperClean menu and DON'T press enter when in it.

Going to the WiperClean menu will unlock the head

Step 2 : Remove the two screws fixing the sponge (1).

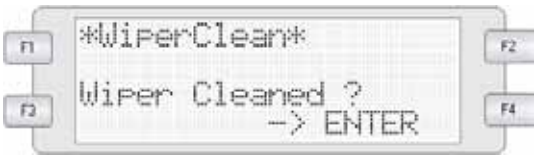


1 = Screws fixing the sponge (1)

Step 3 : Replace the sponge and tighten it again to the plate with the two screws.

1 = Capping sponge
2 = Plate

Step 4 : Close the front cover and press the [ENTER] key in the active display (=WiperClean menu)



The head will cap in and be locked.

4.1.4 Cleaning

You need to clean the printer periodically to keep it in best working condition.

⚠ Important ⚠

- **Do not insert or drop metal or inflammable objects into openings, such as ventilation outlets. Doing so may result in electrical shock and fire.**
- **Stop using your printer if a liquid is spilled into it. This may cause electrical shock or fire. Power the printer OFF as soon as possible, unplug the power cord and then contact your local MUTOH dealer.**

⚠ Caution ⚠

- **Be sure to power OFF the printer and unplug the power cable from the outlet before cleaning the printer.**
- **Do not use thinner, benzene, alcohol or other active agents. Doing so may result in damage or paint peeling from the casing.**
- **Be careful not to spill water inside the printer. Doing so may result in a short circuit.**

Following are instructions for cleaning the printer.

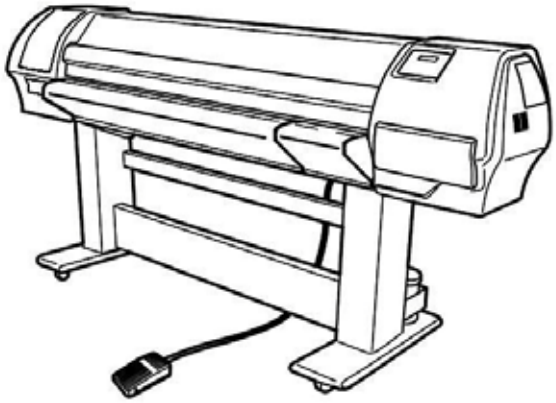
4.1.4.1 Cleaning the outer case

(1) Cleaning frequency

Clean once a month.

(2) Cleaning procedure

Remove dust or smudges on the outer case with a soft cloth.



4.1.4.2 Cleaning the inside of the printer

(1) Cleaning frequency

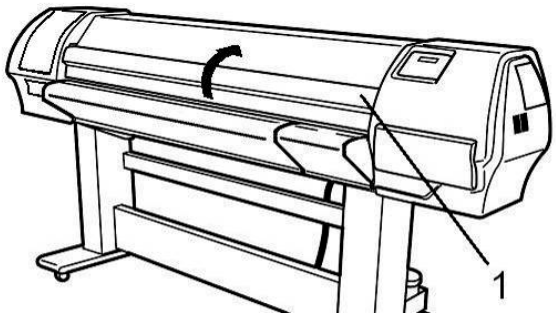
Clean once a month.

(2) Cleaning procedure

The following are instructions for cleaning the inside of the printer.

Follow the steps below.

Step 1 : Open the front cover.



1 Front Cover

Step 2 : Use a soft brush to carefully clean away any dust or dirt on the pressure rollers.

⚠ Notes ⚠

Do not blow off media dust inside the printer using an air dusting machine. Doing so may cause noise to occur from inside the printer.

Step 3 : Use a cloth soaked in cleaning liquid and squeezes it well, wipe off media dust and ink from the platen.

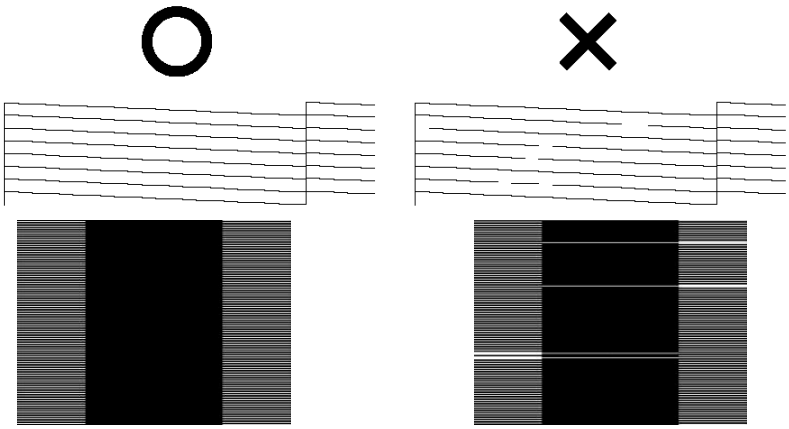
4.1.4.3 Head cleaning

If printouts become faint or partially missed, perform head cleaning to clean the surface of the head and the nozzles.
Follow the steps below to perform head cleaning.

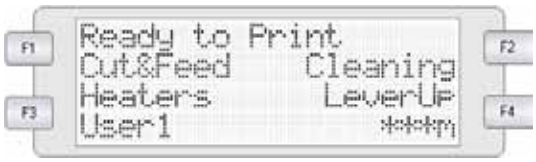
Step 1 : Make sure that the state of the product is normal.

Step 2 : Refer to "TestPrinting" to perform nozzle check printing.

Step 3 : Check if the print head, referring to the diagram below.



Step 4 : Check the printer is in the main screen.



Step 5 : Press the [F2] key on the operation panel.

I) The printer enters the cleaning menu.

Step 6 : Press the [F2] key on the operation panel to change the parameters.

Key	Parameter	Description
F2	Small	Small cleaning is performed.
	Normal	Normal cleaning is performed.
	Strong	Strong cleaning is performed.

Step 7 : Press the [ENTER] key on the operation panel to start the head cleaning.

Step 8 : When the head cleaning has been completed, the printer returns to the main screen.

Step 9 : Perform a nozzle check again and check the print head.

4.2 DONE BY AUTHORISED MUTOH TECHNICIAN

An Authorized Mutoh technician should check and replace some components of your printer on frequent base (every 6 and 12 months).

Be sure to remind your distributor when the replacements should be done.

It is very important not to skip a maintenance intervention in order to maintain constant print quality and to keep your warranty.

Please refer to the table below to know what the Authorized Mutoh technician should do.

No	Action	Frequency
1	Changing the dampers	Every 6 months
2	Changing the spitting box + tube + L connection	
3	Applying grease on the head up-down cams when needed	
4	Applying grease on the Y-motor belt if needed	
5	Applying grease on the roller path carriage if needed	
6	Applying grease on the capping station cam and gears if needed	
7	Removing dust in the fan area underneath the print platform	
8	Changing the pumps	Every 12 months
9	Changing the tubes from the pumps to the waste bottle	
10	Changing the maintenance station	

⚠ Notes ⚠

- All cleaning in “Ink areas” must be done with Mutoh water based cleaning solution.
- Above maintenance cycle is based on use:
  8 hours / day, 5 days / week and 44 weeks / year.
  If machine is used more, maintenance periods will come earlier.
- **Please refer to the latest spare part price list for the part numbers of the maintenance kits.**

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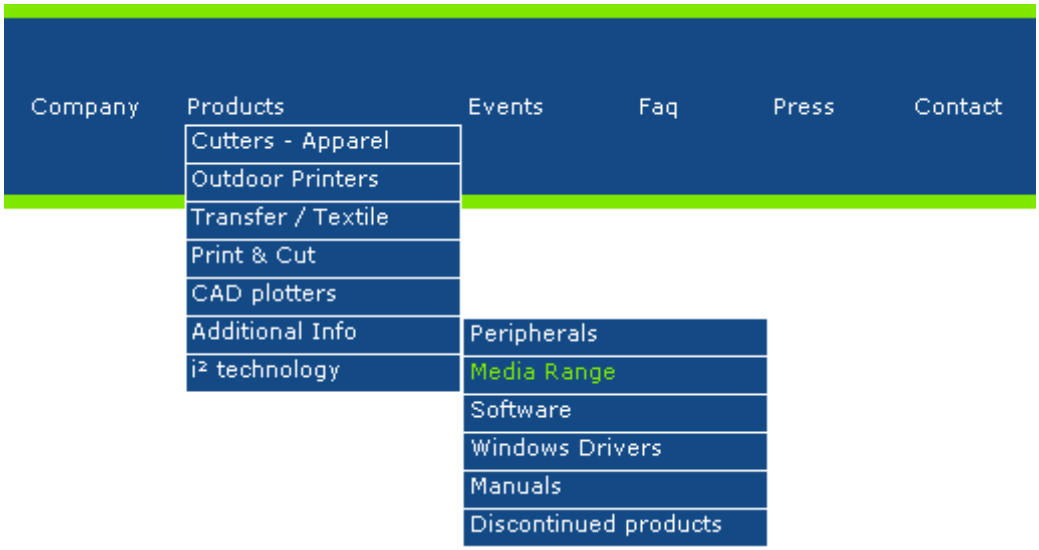
5 PREPARATIONS BEFORE PRINTING

5.1 USING MEDIA

This section describes details on available media for the printer.

5.1.1 Media range

Please refer to Mutoh's website (www.mutoh.eu or www.mutoh.be) for the media compatibility lists for all our products.



For a **FULL overview of today's Mutoh Media Range**, in which you will find not only order codes, media type, basic description, width and length, but also compatibility of each individual media type with the different Mutoh inks/printers, **click here**: http://www.mutoh.be/01/MyDocuments/Mutoh_Media_Range.xls.

For further specifications of Mutoh media and media compatibility of leading media manufacturers, please refer to the topics below:

- Mutoh's genuine media - specification sheets
- Media compatibility

For media, Mutoh has a twofold approach. In the first place, Mutoh is permanently in contact with the leading media manufacturers to define and fine-tune their media in combination with the Mutoh printers.

Secondly, for the first-time users or users who do not want to go through the hassle of searching, testing and profiling media, Mutoh provides an own range of specially developed media for the Mutoh printers. As a result of Mutoh's in-house extensive media test program, there is media targeted at outdoor applications, media aimed at indoor applications where long-term indoor lifetime expectancy of the output is required and media specially designed for making colourful banners.

Free of charge, Mutoh provides you ICC profiles targeted for use with the printer's ink and media range. These free of charge ICC profiles are at all times accessible under each product page.

5.1.2 Cautions on handling media

When you handle media, please pay attention to the following:

- Use recommended media in an appropriate environment. Following are the appropriate temperature and humidity ranges for printing.

	Temperature	Humidity
Recommended working environment	20-30°C	40% to 65%
Rate of change	Within 2°C per hour	Within 5% per hour

- Do not use creased, damaged, torn, curled, or wrapped media.
- Temperature changes will influence the size of media that is used. Before using sheet media, place the sheet in the working environment to have it match to the temperature of the working area.
- Printing before the media has been able to accommodate to the printing environment may cause media jams due to slippage or creases. This also adversely affects the quality of printing.
- Media has a printable side and a non-printable side. If you print on a not printable side, blurring or slight touching may occur.
- Do not touch the printable side of media. Moisture or oil from hands affects the printing quality.
- Do not leave the printer for a long time with media loaded. The media may curl, resulting in misalignment, media jams, or decreased printing quality. In particular, avoid this in winter, dry seasons, or during final printing.
- Do not throw away the box or wrapping bag for storing media.

5.1.3 Precaution on storing media

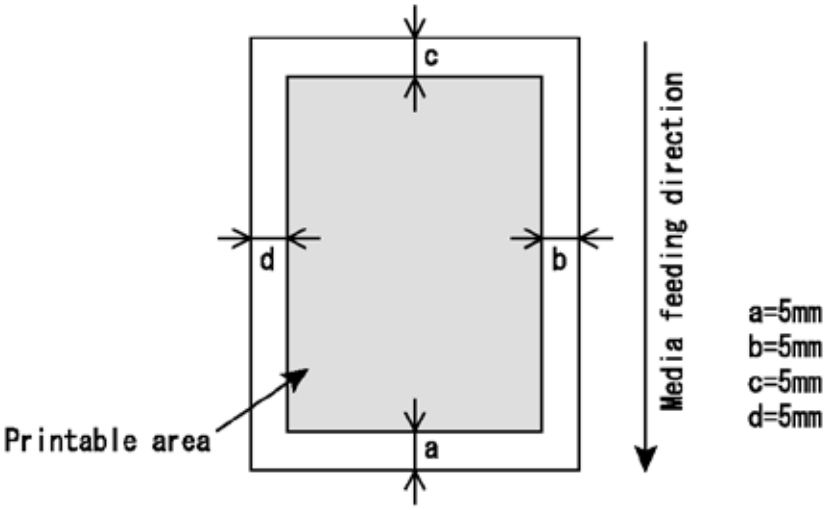
When storing media, pay attention to the following.

- Do not store media in high temperature, high humidity, or direct sunlight.
- Store sheet media in the original bag after unpacking.
- Unused roll media must be removed from the scroller, rewound tightly, and stored in the original wrapping bag and the box.
- Do not wet media.

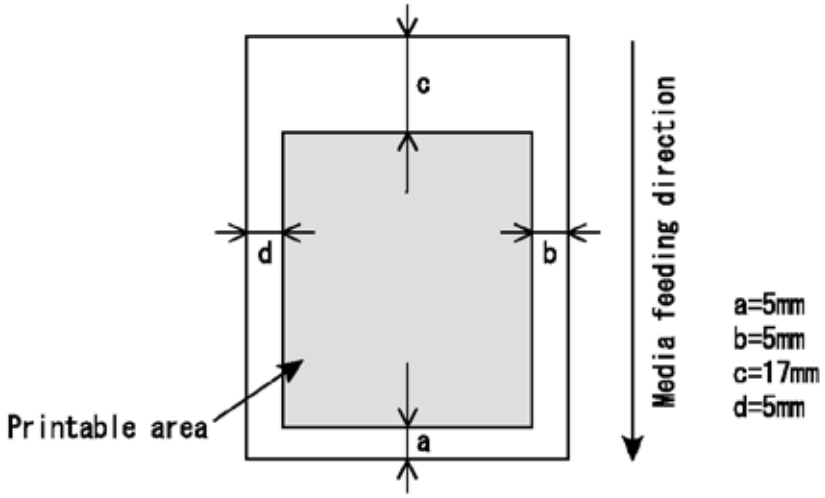
5.1.4 The printing area

The printing area is shown below.

(1) Roll media



(2) Sheet media



5.2 SET THE CORRECT DISTANCE ADJUST (STEP)

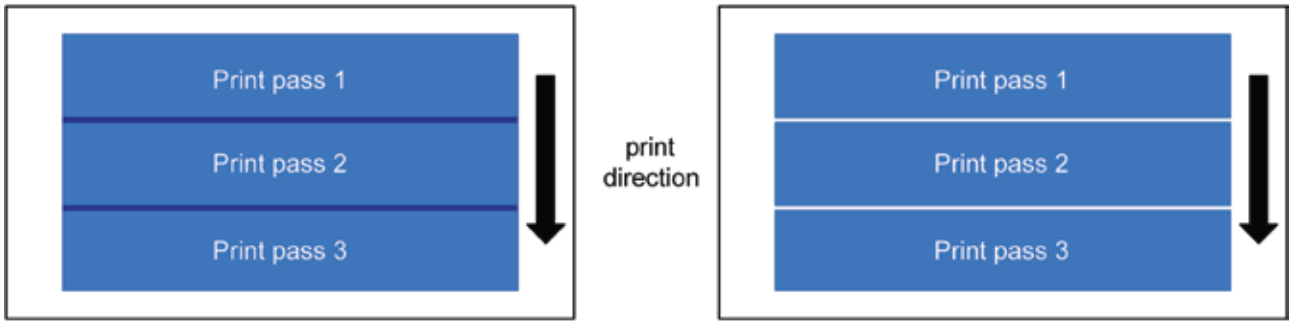
Obtaining constant printing quality on a wide-format Piezo inkjet printer is not only determined by the working environment, the RIP, the profiles, the inks and the media which are used. One of the key factors for obtaining constant output quality is the correct distance adjustment, also called “step”, on your Mutoh inkjet printer.

5.2.1 Basics about the step

Every image is printed in several print passes. After every pass, the media is fed an amount of millimetres. When the step is not set correctly, the passes will overlap each other or will not be printed precisely next to each other which results in white bands between two print passes.

Therefore a function, distance adjust (or step), is added to the menu to control this feed operation.

Refer to the table below for visual support



The passes overlap each other
► step between the print passes is too small

The passes are printed too far from each other
► step between the print passes is too large

⚠ Notes ⚠

It is recommended to start printing with a step of 100.00% and to adjust it afterwards. Once a step is set for a particular media it will not change on following conditions:

- The step is only applicable on the printer in question and not interchangeable.
- The media manufacturer does not change any specifications (especially backing) of the media.
- The standard take-up system is used in combination with the I² technology.
- The optional unwinder/winder 100 is used.

Please refer to the next chapter to know where and how to change the step.

5.2.2 How to determine and change the step

Step 1 : Power ON the printer.

Step 2 : Load the media to print on.

⚠ Notes ⚠

BE SURE TO TIGHTEN THE MEDIA TO THE WINDER 100 BEFORE SETTING THE STEP. THIS BECAUSE THE STEP WILL BE DIFFERENT WHEN PRINTING ROLL-TO-SHEET THAN WHEN PRINTING ROLL-TO-ROLL.

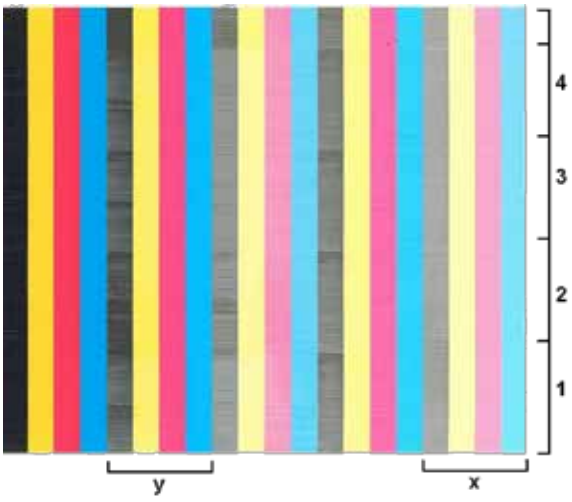
Step 3 : Perform a NozzleCheck to be sure all nozzles are present. If not, perform the necessary cleanings.

Step 4 : Set the step to 100.00%

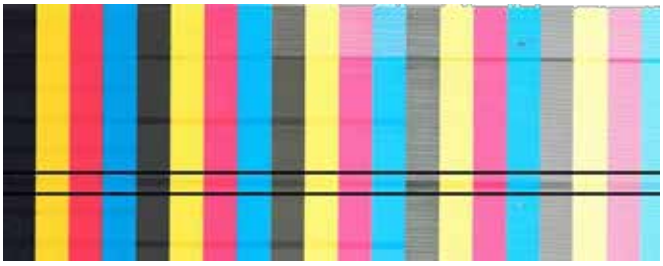
Step 5 : Print the test pattern. (SetupMenu 1/7 > TestPrint [F3] > Dist.Check [F2])

▼

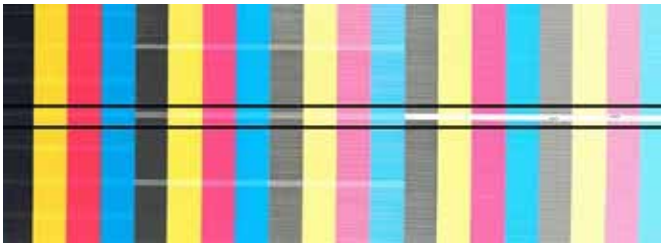
Step 6 : To evaluate the print, you should look for gaps or overlaps between the different passes (1-4). The direction of the adjustment (increase or decrease the step adjust value) is the easiest to check in the X-rows. To check the quality, the Y rows should be the standard.



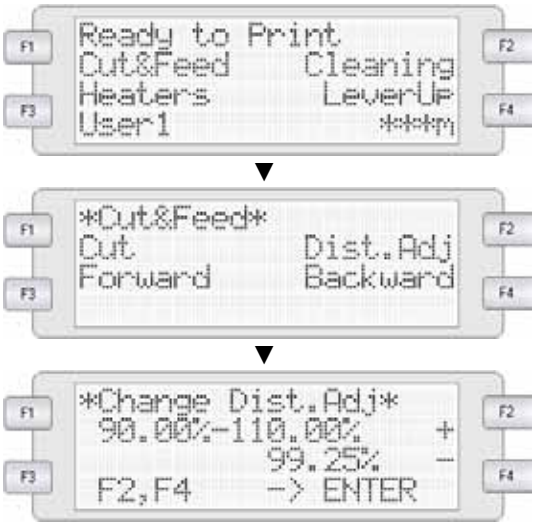
Step 7 : Step is too small ► overlap visible between passes



Step is too big ► gap visible between passes



Step 8 : Change the step if necessary.



Step 9 : Print the test pattern again until no gap or overlap is visible anymore.

5.2.3 How to change the step on the fly.

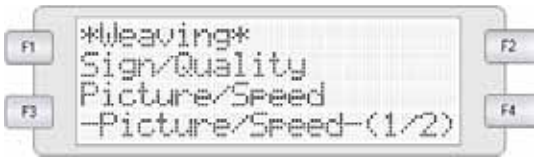
Step 1 : Press F1 while printing.

Step 2 : Press F2 or F4 to change the step.

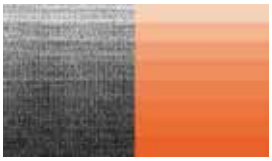
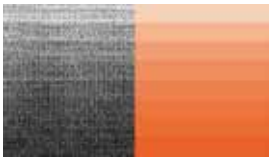
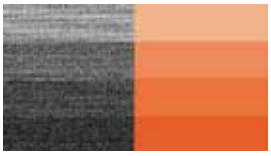
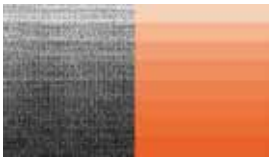
5.3 I² TECHNOLOGY

Without weaving ON, an image is completed (formed) by printing a series of complementary rectangular shaped stripes (bands, swaths, passes). Inherent to classic inkjet printing is that ink drying effects, stepping mismatch, miss firing nozzles show up in the printed image via ink bleeding and various types of banding. By switching ON one of the weave patterns you will give the traditional rectangular print swaths a wave-shaped look that will save you time and boost your output quality. Difficult images will print smoother, banding will be suppressed (neutralized) and you will have to spend less time fine-tuning your printer to create great looking output.

Moreover, when using wave-tuned profiles, you will be able to boost your printer's colour gamut as the i² (intelligent interweaving) technology allows depositing more ink, helping you to achieve higher colour densities.



Setup items	Parameters	Description
Weaving (1/2)	Sign / Quality	Please refer to the table below to know what the different weaving forms are and which one to use.
	Picture / Speed	
Weaving (2/2)	Stitch	
	Classic	
	Off	
Weaving (1/2 – 2/2)	-	[CANCEL] key: To shift to the previous hierarchy menu.

Weaving method	User Tip	Print Modes Supported	2 pass	4 pass
Sign / Quality	Preferred setting for signage/poster applications containing big areas with solid colours or critical gradients and for photo quality output on coated media. *(small loss of speed in 2 pass modes)*	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass Default selection after firmware installation		
Picture / Speed	Preferred setting for non-sign images, pictures, continuous tone data. *(no speed loss)*	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4-pass is a quality mode and will always use a tuned sign weave pattern, even if picture is selected from the panel / RIP.		
Stitch	Creates a fine print swath overlap. Mildly improves print quality versus "Off" setting. *(lowest level of interweaving)*	720x720: 2 pass, 4 pass 540x720: 2 pass, 4 pass (*) 4 pass data will be printed as classic		
Classic	Use classic to maintain classic printer behaviour in all print modes. *(prior to firmware version 3.01)*	All print modes		
Off	Switches off any kind of overlap/weaving. Useful when trying to inspect individual nozzle behaviour or checking the step-adjust.	All print modes		

5.4 PRINTING FLOW

The following flowchart gives you a view on which steps should be taken to make a print. This is a very short summary of what should be done.

SELECT MEDIA
(Refer to the media compatibility lists on www.mutoh.be)

▼

LOAD MEDIA
(Refer to the chapter "Loading Media")

▼

PERFORM NOZZLECHECK AND CLEANINGS IF NECESSARY
(Refer to the chapter "TestPrinting")

▼

SET STEP
(Refer to chapter "Set the correct distance adjust")

▼

SELECT IMAGE

▼

LOAD DEDICATED PROFILE (*) AND RIP IMAGE
(Refer to profiles section on www.mutoh.be)

▼

DECIDE WHICH WEAVING PATTERN SHOULD BE USED (SIGN/PICTURE)
(Refer to chapter "i² technology")

▼

PRINT IMAGE

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* It is highly recommended to use one of the profiles Mutoh is making available on the website. A lot of parameters are included.

The most important ones are:

Ink an colour management related	PrintMode related	Media related
· Ink Restrictions	· Resolution	· Heater settings
· Linearization	· Amount of passes	· Media thickness
· Ink limits	· Unidirectional – Bi Directional	· HeadHeight
· ICC Profile	· Weaving ON – OFF	

The file name of each profile is build up in the same way

For example

6 PRINTER MENU

6.1 HOW TO WORK IN THE MENU

Please find below all necessary information on how to switch, select and cancel menu items.

6.1.1 Main screen

When powering ON the printer, it will (when no errors occur) start up in its main screen. The function of each key is explained below.

No	Position	Description	Example
1	1st line	Displays the current status of the printer.	Ready to print
2	Left of 2nd line	Displays the function assigned to [F1] key	Cut&Feed
3	Right of 2nd line	Displays the function assigned to [F2] key	Cleaning
4	Left of 3rd line	Displays the function assigned to [F3] key	Heaters
5	Right of 3rd line	Displays the function assigned to [F4] key	Lever Up
6	Left of 4th line	Displays the currently set media type	User 1 – 8
7	Right of 4th line	Displays the approximate amount of remaining media in meter. However, the amount is displayed only when either "Roll media 1", "Roll media 2", or "Roll media 3" is selected in the Roll media setting menu.	30 m

6.1.2 Menu screen

In the SetupMenu, changes can be made to the printer settings.
The content displayed on the LCD monitor of the operation panel is as follows:

No	Position	Description	Example
1	1st line	Displays the setting menu name currently set.	SetupMenu
2	Left of 2nd line	Displays the function assigned to [F1] key.	InkStatus
3	Right of 2nd line	Displays the function assigned to [F2] key.	OriginSet
4	Left of 3rd line	Displays the function assigned to [F3] key.	TestPrint
5	Right of 3rd line	Displays the function assigned to [F4] key.	MediaSet
6	4th line	Displays the currently available functions of the [F1] key to the [F4] key or displays the page status if there are multiple pages for the currently displayed setting menu.	1/7

6.1.3 Changing between the screens

To change the printer status, follow the steps below.

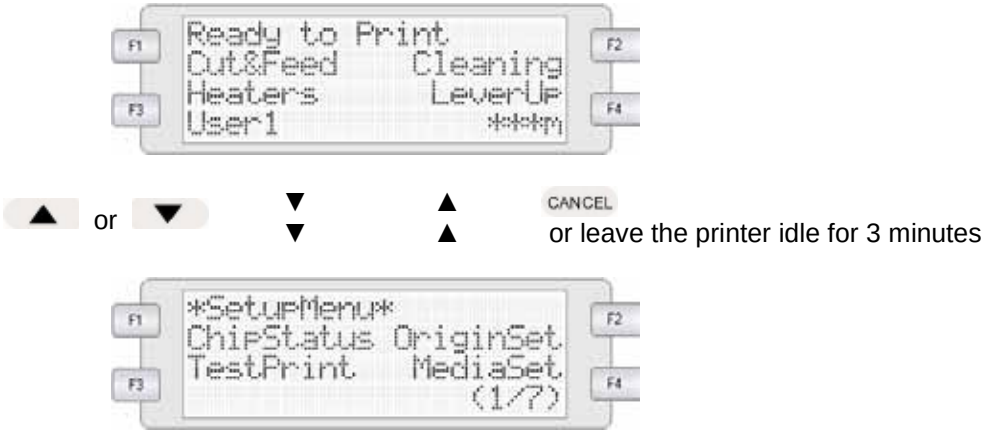
6.1.3.1 From main screen to menu screen

Press either ▲ or ▼ on the operation panel when the printer is in the main screen to go to menu screen 1/7 – 7/7

6.1.3.2 From menu screen to main screen

To switch from a menu screen to the main screen, following actions can be taken:

- Press the [CANCEL] key on the operation panel.
- Leave the printer for 3 minutes when the status is in the setting menu display.



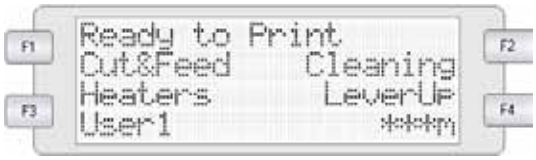
6.2 OPERATION PANEL IN STANDBY MODE

This section describes functions operated on the operational panel when the printer is in the normal status.

6.2.1 [F1] – Feeding, Cutting media and Step Adjust

When you want to feed media forward or backward, follow the steps below:

Step 1 : Verify the following regarding the condition of the printer.
I) It is not currently printing



Step 2 : Press the [F1] key of the operation panel.
I) To shift to the Cut&Feed menu.

Step 3 : Press the [F3] key or the [F4] key on the operation panel.
I) The product will perform following operations:

Setup items	Key name	Parameters	Description
Cut & Feed	F1	Cut	Cut media
	F2	Dist.Adj.	Set step
	F3	Forward	Feeds media forward.
	F4	Backward	Feeds media backward.

⚠ Notes ⚠

If "Take-Up Roll" is set in the media detection setup menu, the product will not operate even if the [F4] key has been pressed.

6.2.2 [F2] - Cleaning the heads

When there are some missing nozzles, a cleaning should be done. Depending on the quantity of missing nozzles and which head, a little, normal or powerful cleaning on head 1-2, head 3-4 or ALL could be done.

Step 1 : Verify the following regarding the condition of the printer.
I) It is not currently printing

Step 2 : Press the [F2] key of the operation panel.
I) To shift to the cleaning menu.

Step 3 : Press the [F1] key or the [F2] key on the operation panel.
I) The product will perform following operations:

Setup items	Key name	Parameters	Description
Cut & Feed	F1	ALL, Head 1 – Head 2	Clean ALL heads or head couple one or two
	F2	Little, normal, powerful	Set the intensity of a cleaning

Step 4 : Press the [ENTER] key to start the requested cleaning.

6.2.3 [F3] - Controlling the heater elements

If you want to change or check the heater elements, follow the steps below.

Step 1 : Verify the following regarding the condition of the printer.
I) It is not currently printing

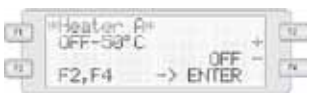
Step 2 : Press the [F3] key of the operation panel.
I) To shift to the heater menu.

The 'heater message' can be one of the following:
- Heater standby
- Heater warming up
- Heater ready

'A' stands for the heater.
'B' stands for the fixer.
'C' stands for the post fixer.
'D' stands for the dryer.
'S' stands for the Set-temperature (requested temperature).
'R' stands for the Real-temperature (actual temperature).

6.2.3.1 Change the heater temperature

To change the temperature of one of the heaters, press the [F1-F4] key on the operation panel. The display will mention the following:



Press the [F2] key to decrease the temperature.
Press the [F4] key to increase the temperature.
Press the [ENTER] key to confirm the requested temperature change.
Press the [CANCEL] key to leave the menu without changing the heater settings.

6.2.3.2 Activate/ deactivate heaters.

In the second menu, press the [F1] key to activate or deactivate all heating elements.

In case the heating elements are activated, the display will mention “SET OFF”. By pressing the [F4] key you can deactivate the heating elements. The display will mention “SET ON”.

In case the heating elements are deactivated, the display will mention “SET ON”. By pressing the [F4] key you can activate the heating elements. The display will mention “SET OFF”.

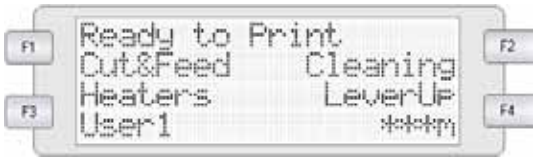
Please note that after finishing a printing job (and no other print job is sent to the printer the heating elements will keep their temperature for approximately 6 minutes. After 6 minutes the heating elements are powered OFF.

6.2.4 [F4] - Operating the pressure rollers

When you want to switch the up and down movement of the pressure rollers follow the steps below.

Step 1 : Press the [F4] key on the operation panel.

I) The printer works as follows.



Status of the printer	Operation after the [F4] key has been pressed
The pressure rollers have been lowered The MEDIA SET lamp switches OFF.	The pressure rollers are lifted The MEDIA SET lamp will turn on (orange).
The pressure rollers have been raised. The MEDIA SET lamp switches ON (orange).	The pressure rollers are lowered. The MEDIA SET lamp will turn off.

⚠ Notes ⚠

You can also switch the up and down movement of the pressure rollers using the foot switch instead of the operation panel.

6.2.5 [ENTER] - Print mode check

Use the following procedure to check the print mode currently set.

Step 1 : Press the [ENTER] key on the operation panel.

I) The following information is displayed on the operation panel for three seconds.

Line 2
Line 3
Line 4

No.	Position	Description	Reference
1	Line 2	The printing quality is displayed.	Refer to ‘Printing quality menu’
2	Line 3	The interlace method is displayed.	Refer to ‘InterLace Setup menu’
3	Line 4	The printing direction is displayed.	Refer to ‘Printing direction menu’

Step 2 : When the printing mode display closes, the product changes to its main screen.

6.3 OPERATION PANEL DURING PRINTING

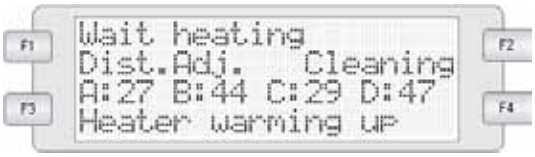
When sending a file to your printer, following messages can be displayed.

6.3.1 When heaters are not ready

When the heaters are not reached their target temperature, the following screen will be displayed.

Still, it is possible to start the print. However, the heater will continue to warm up in order to reach the requested temperature.

Step 1 : Press the F3 key to ENTER the HeaterStatus menu.



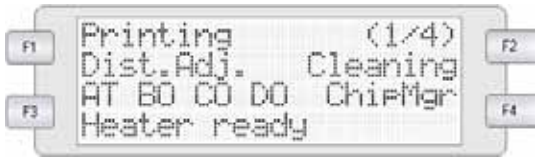
Step 2 : Go to submenu 2/2 and press the F2 key to start the print.

6.3.2 When heaters are ready

When heaters are ready, the printer will start printing.
While printing, some actions can be taken.

6.3.2.1 [F1] - On the fly step adjustments.

In case of overlapped printing images or white lines on printing image, the step should be adjusted.



(+) Increase in case of overlap

(-) Decrease in case of white lines between swats

⚠ Notes ⚠

For more details about step adjustment, please refer to “Media Feed Compensation”

6.3.2.2 [F2] - Cleaning

While printing, it could be possible that some nozzles drop out, in that case, perform a little, normal or powerful cleaning.

Please follow the steps below to perform a cleaning.

When there are some missing nozzles, a cleaning should be done. Depending on the quantity of missing nozzles and which head, a little, normal or powerful cleaning on head 1-2, head 3-4 or ALL could be done.

Step 1 : Press the [F2] key of the operation panel.
I) To shift to the cleaning menu.

Step 2 : Press the [F1] key or the [F2] key on the operation panel.
I) The product will perform following operations:

Setup items	Key name	Parameters	Description
Cut & Feed	F1	ALL, Head 1 – Head 2	Clean ALL heads or head couple one or two
	F2	Little, normal, powerful	Set the intensity of a cleaning

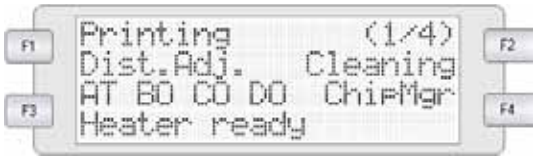
Step 3 : Press the [ENTER] key to start the requested cleaning.

6.3.2.3 [F3] - Adjust heaters

While printing, the heater values can be changed. For example: when noticing cockling.

Please follow the steps below to adjust the heater temperatures.

Step 1 : Press the [F3] key



Step 2 : Following screen will be displayed

Step 3 : Change the value of one or more heaters or switch them all off.

⚠ Notes ⚠

For more details about heater adjustment, please refer to “Controlling the heater elements on the Rockhopper 3 Extreme printer”

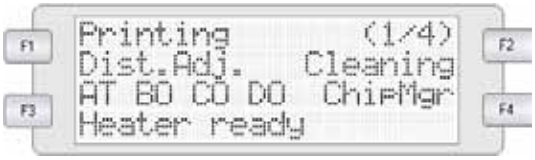
6.3.2.4 [F4] - Loading ink volume during printing

It is possible to load ink volume to the printer during printing.

There are two possible scenarios:

- SmartChip management system is not empty yet and the printer keeps printing.

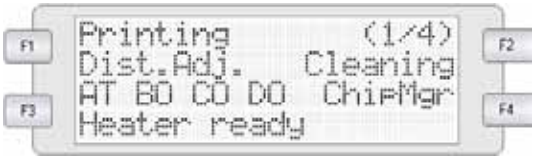
  Press the F4 key to load ink volume.



- SmartChip management system is empty and the printer stops printing but does NOT cancel the print.

  The following message will appear

  Press the F4 key to load ink volume.



⚠ Notes ⚠

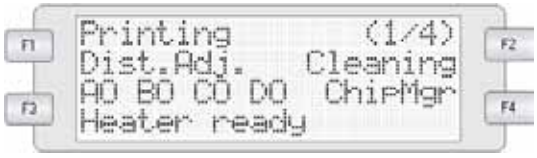
- Please refer to chapter 4.10 to load ink volume properly.
- Please note that the heaters will switch off after 15 minutes. After that point you will have to reconfigure the heaters manually before resuming the print job. This is the same behaviour as when a cassette gets empty.

6.3.2.5 Menu ▼ and ▲

During printing, extra information about the current job is available. Use the menu UP and DOWN keys to browse through these menus.

1) Menu 1/4

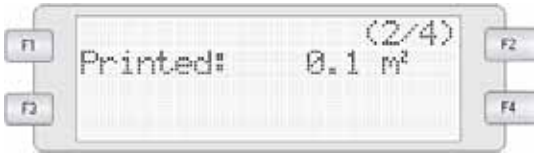
Standard menu during printing. **It is only possible to cancel a print in this menu!**



2) Menu 2/4 and 3/4

Two situations are possible:

· Length information is not provided with the job. The printer cannot know progress and remaining time. However, size of the already printed area is shown.



· Length information is provided; the printer calculates progress and remaining time. The correctness of this depends on the correctness of the provided information.

4) Menu 4/4

This menu displays the important print parameters provided by the RIP software.

6.4 OPERATION PANEL AFTER PRINTING

The operations performed after printing, are described here.

6.4.1 Cut off media with the printer knife

The media cutting procedure is described below.
Roll media is automatically cut after printing when "Auto" is set on the cut media menu and roll media has been set.
When the operation panel is in the main screen, and the product is in the following conditions, the media can be cut on the desired position:

- When roll media has been set:
- If "OFF" is set on the cut media menu
- If "Take Up Roll" has been set in the media detection setup menu
- When sheet media has been set

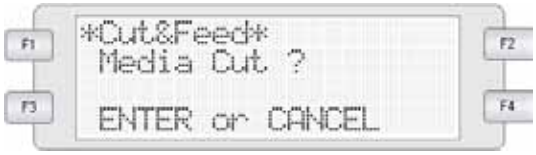
Follow the steps below to cut the media.

Step 1 : Make sure that the MEDIA SET lamp on the operation panel is off.

Step 2 : Press the [F1] key on the operation panel to shift to the cut and feed menu.

Step 3 : Feed media to the desired position using the [F3] and [F4] key.

Step 4 : Press the [F1] key to cut the media.



I) Press the [ENTER]-key to cut the media or the [CANCEL]-key to abort this operation.

⚠ Notes ⚠

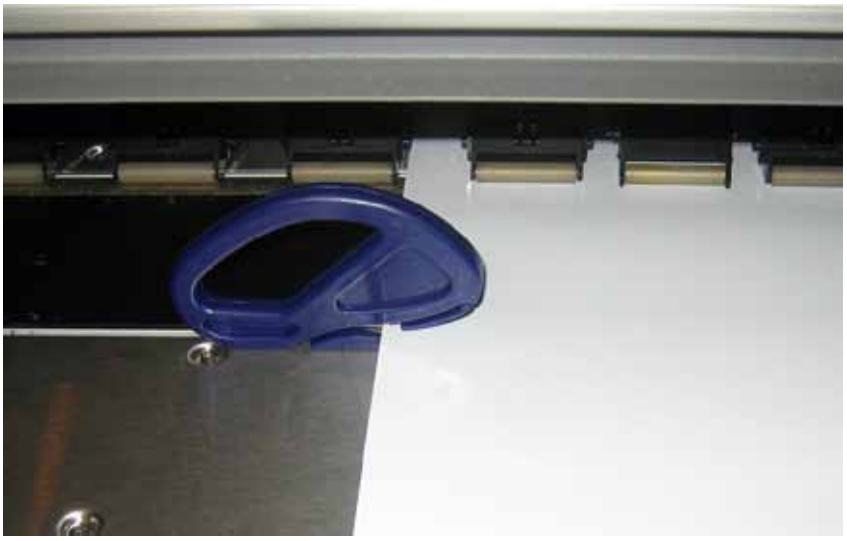
If the front edge of the roll media is not straight when you load new roll media, you should cut its edge.
Cutting blades are consumable. Replace them at regular intervals following "Replacing the cutting blade".

6.4.2 Manually cut off media

This section explains how to cut the media manually.
When "Manual" is set in the media cut menu, the media can be cut manually.
Cut the media according to the following procedure.

Step 1 : Feed media to the desired position using the [F3] and [F4] key.

Step 2 : Cut the roll media following the cutting groove.



6.5 MENU OVERVIEW (1/7 – 7/7)

SetupMenu 1/7

Ink Status/ Chipstatus

Origin Set	(1/1)	Top Bottom Left Right						
Test Print	(1/2)	Setup Nozzle Check Adj. Uni-D Adj. Bi-D						
	(2/2)	Palette Maintenance Dist. check						
Media Set	(1/1)	Media	(1/2)	User 1 User 2 User 3 User 4	(1/3)	Ink Dry Time Head Height	(1/1)	Low Middle High
						Stiffness	(1/1)	Soft Normal
			(2/2)	User 5 User 6 User 7 User 8		Thickness		
					(2/3)	Heater Fixer PostFixer Drier		
					(3/3)	Hstatus Dist.Adj	(1/1)	Print 1 Print 2 Change
		SheetSize	(1/1)	Auto Length Width				
		Top Feed Media Cut	(1/1)	Off Auto Manual				

SetupMenu 2/7

Print Mode	(1/1)	Prn Mode 1 Prn Mode 2 Prn Mode 3 Prn Mode 4	(1/2)	Condition	(1/5)	360 x 360	1pass 2pass	1pass few 4pass
						720 x 360	2 pass	4 pass
						360 x 720	1pass 2pass	1pass few 4pass
						Diag 720	1pass 2pass	1pass few 4pass
					(2/5)	540 x 720	2 pass	4 pass
						720 x 720	2 pass	4 pass
						1080 x 1080	4 pass	
						1440 x 720	4 pass	
					(3/5)	720 x 1440	2 pass	4 pass
						Diag 1440	2 pass	4 pass
						1440 x 1440	4 pass	
						2160 x 1080	4 pass	

					(4/5)	1080 x 2160	4 pass
						Diag 2160	4 pass
						2880 x 1440	4 pass
						1440 x 2880	4 pass
					(5/5)	Diag 2880	4 pass
				Direction	(1/1)	UniDir	
						BiDir	
				Repeat Prn	(1/1)	Count	
						IntervalTime	
				HeadSpeed	(1/1)	Normal	
						Fine	
			(2/2)	Weaving	(1/2)	Sign/Quality	
						Picture/Speed	
					(2/2)	Stitch	
						Classic	
						OFF	
				ScanWidth	(1/1)	DataWidth	
						MediaWidth	
						FullWidth	
Command	(1/1)	Step	(1/1)	0,010 mm			
				0,025 mm			
		Resolution	(1/2)	360			
				600			
				720			
				1080			
			(2/2)	1200			
				1440			
				2160			
				2880			
		OnlineTimer					
Layout	(1/1)	Joint	(1/1)	ON			
				OFF			
		CutPosition	(1/1)	Standard			
				Data			
Function	(1/1)	CMY > K	(1/1)	No			
				Yes			

SetupMenu 3/7

Roll Setup	(1/1)	Disable
		Roll 1
		Roll 2
		Roll 3
Centro	(1/1)	Centro
		BiCentro
Network	(1/1)	Ipadress
		SubnetMask
		GateWay

SetupMenu 4/7

Utility	(1/3)	ErrorDisp	(1/1)	OFF ON
		MediaDet,	(1/2)	Normal OFF TakeUpRoll RollFeed
			(2/2)	Prn+Wipe
		OnCleaning	(1/1)	OFF Normal Little Powerfull
		MediaWidth		
	(2/3)	Prn + Wipe		
		Smart Top	(1/1)	OFF On
		AutoCleaning	(1/1)	Waiting Before Print Printing
		CapCycle		
	(3/3)	SlantCheck	(1/1)	ON OFF
		RemPanel	(1/1)	ON OFF
		RemoteConn	(1/1)	
Initial	(1/3)	All	(1/1)	NO OK
		MediaSet	(1/1)	NO OK
		PrintMode	(1/1)	NO OK
		Command	(1/1)	NO OK
	(2/3)	LayOut	(1/1)	NO OK
		Function	(1/1)	NO OK
		RollSetup	(1/1)	NO OK
		Centro	(1/1)	NO OK
	(3/3)	Network	(1/1)	NO OK
		Utility	(1/1)	NO OK

SetupMenu 5/7

DataDump	(1/1)	Start/End		
		All		
InkManager	(1/2)	HeadWash	(1/1)	NO
				YES
		Discharge	(1/1)	Pump1
				Pump2
				ALL
		InkLoad	(1/1)	Pump1
				Pump2
				ALL
		InkChange	(1/1)	NO
				YES
	(2/2)	LongStore	(1/1)	NO
				YES
		InkSupply	(1/1)	ON
				OFF
		ChipMgr	(1/1)	Printer*
				Cassette
		ColorMode**	(1/1)	2*4_symm
				1*6
				1*8
				2*4_1C1H

(*) For future use only.

(**) Only visible when printer mode is activated in the ChipMgr. menu.

SetupMenu 6/7

H.Unlock	(1/1)	No
		Yes
WiperClean	(1/1)	No
		Yes
TankChg.		
TubingFlush		Head1-2

SetupMenu 7/7

VersionCheck

Area